WHAT IS CLAIMED IS:

1. A color cathode ray tube comprising:
a mask frame;
a shadow mask fixed to the mask frame;
an inner magnetic shield supported by the mask frame; and
an electron shield provided in the mask frame;
wherein at least a part of the electron shield has a smaller anhysteretic magnetic permeability than the shadow mask, the mask frame and the inner magnetic shield when an applied magnetic field is 800 A/m (10 Oe).

2. The color cathode ray tube according to claim 1, wherein the electron shield is formed so as to elongate a front end portion on an electron beam side of the mask frame.

3. The color cathode ray tube according to claim 1, wherein the electron shield is formed of a member different from the mask frame so as to protrude beyond a front end portion on an electron beam side of the mask frame.

4. The color cathode ray tube according to claim 1, wherein a part of the electron shield has a region having a smaller anhysteretic magnetic permeability than another part when the applied magnetic field is 800 A/m (10 Oe).

5. A color cathode ray tube comprising:
a mask frame;
a shadow mask fixed to the mask frame;
an inner magnetic shield supported by the mask frame; and
an electron shield provided in the mask frame;
wherein at least a part of the electron shield has a smaller anhysteretic magnetic permeability than the shadow mask, the mask frame and the inner magnetic shield when an applied magnetic field is 800 A/m (10 Oe), and
the mask frame comprises a L–shaped member having a L–shaped cross–section and a reinforcing member connected with the L–shaped

member, and a part of the reinforcing member has a region having a smaller anhysteretic magnetic permeability than another part when the applied magnetic field is 800 A/m (10 Oe).

6. A color cathode ray tube comprising:

a mask frame;

a shadow mask fixed to the mask frame;

an inner magnetic shield supported by the mask frame; and

an electron shield provided in the mask frame;

wherein at least a part of the electron shield has a smaller anhysteretic magnetic permeability than the shadow mask, the mask frame and the inner magnetic shield when an applied magnetic field is 800 A/m (10 Oe), and

when an electron beam scans a phosphor screen at 100 %, a minimum distance between the electron shield and a path of the electron beam is at least 8 mm.